

VI. DESIGN REQUIREMENTS

Design requirements for roads and highways vary according to the desired capacity and level of service to be provided. Thus, universal standards to be followed in design are not practical and each section must be individually analyzed.

The level of service is a function of the ease of movement experienced by motorists using the facility. The ability of a motorist to drive at a desired speed is dependent upon the physical design of the street; the amount and character of traffic control devices; the influence and character of traffic generated by abutting property; and imposed speed restrictions. The level of service is generally indicated by the over-all travel speed¹ experienced by traffic. Recommended minimum levels of service for roads and highways included in the proposed Montgomery County Thoroughfare Plan are given in Table 5.

Table 5. Desirable levels of service for roads and highways in Montgomery County

Facility	Overall Travel Speed During Peak Traffic Conditions
Major and Minor Arterials	50-55 MPH
Major Collector Roads	45-50 MPH
Minor Collector Roads	40 MPH

From the standpoint of driver convenience, ease of operation, and safety, it would be desirable to widen all existing roads and highways to provide a minimum lane width of 12 feet. However, when considering overall statewide needs and available highway revenues, it is found that these levels of improvement applied statewide would be impractical. It is necessary, therefore, to establish minimum tolerable widths for existing roads with respect to traffic demands which would be economically feasible. Table 6 gives the widths used in determining the existing lane deficiencies in the County.

¹The overall speed is the total distance traveled divided by the total time required, including all traffic delays.